

CLAIMS

1. An information recording medium comprising:

a data area to record therein record data;

5 a spare area to record therein evacuation data which is record data to be recorded at a position of a defect in said data area or which is record data recorded at the position; and

a temporary defect management area to temporarily record therein defect management information including at least an evacuation source
10 address which is an address of the position and an evacuation destination address which is an address of a recording position of the evacuation data,

the evacuation destination address being specified by a first offset address based on one predetermined point in said spare area.

15 2. The information recording medium according to claim 1, further comprising a control information recording area to record therein information for controlling at least one of operations of recording and reading in said data area, said control information recording area including a definite defect management area to record therein defect management information of said
20 data area.

3. The information recording medium according to claim 1, wherein the one point corresponds to a start point of said spare area.

25 4. The information recording medium according to claim 1, wherein a point defining information to define the one point is recorded.

5. The information recording medium according to claim 1, wherein the evacuation source address is specified by a second offset address based on another predetermined point in said data area.

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6. The information recording medium according to claim 1, wherein the information recording medium comprises a plurality of spare areas, and

the first offset address is an address which is bridged over the plurality of spare areas based on the one point defined by only one with respect to the plurality of spare areas

7. A recording apparatus for recording record data onto an information recording medium comprising: (i) a data area to record therein record data; (ii) a spare area to record therein evacuation data which is record data to be recorded at a position of a defect in said data area or which is record data recorded at the position; and (iii) a temporary defect management area to temporarily record therein defect management information including at least an evacuation source address which is an address of the position and an evacuation destination address which is an address of a recording position of the evacuation data,

said recording apparatus comprising:

a defect management information generating device for generating or updating the defect management information; and

a recording device for recording at least one of the record data, the evacuation data and the generated or updated defect management

information,

said defect management information generating device generating the evacuation destination address which is specified by a first offset address based on one predetermined point in said spare area, to thereby generate or
5 update the defect management information.

8. The recording apparatus according to claim 7, wherein said defect management information generating device generates or updates the defect management information with a start point of said spare area as the one
10 point.

9. The recording apparatus according to claim 7, wherein the information recording medium further comprises a control information recording area to record therein point defining information for
15 defining the one point, and

said defect management information generating device generates or updates the defect management information on the basis of the point defining information.

20 10. The recording apparatus according to claim 7, further comprising: a first recording control device for controlling said recording device to record the defect management information into said temporary defect management area if said defect management information generating device generates or updates the defect management information.

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11. The recording apparatus according to claim 7, wherein

the recording apparatus further comprises a defect management information obtaining device for reading the defect management information from said temporary defect management area of the information recording medium on which the defect management information is recorded in said
5 temporary defect management area,

said defect management information generating device updates the defect management information read by said defect management information obtaining device when said recording device records the record data into said data area, and

10 said first recording control device controls said recording device to record the defect management information into said temporary defect management area when the defect management information is updated.

12. The recording apparatus according to claim 7, wherein

15 the information recording medium further comprises a control information recording area to record therein information for controlling at least one of operations of recording and reading in said data area, said control information recording area including a definite defect management area to record therein defect management information of said data area, and

20 said recording apparatus further comprises:

a finalize command device for giving a command to finalize the information recording medium; and

a second recording control device for controlling said recording device to record the generated or updated defect management information into said
25 definite defect management area when finalize command device gives a command to finalize the information recording medium.

13. A recording method in a recording apparatus for recording record data onto an information recording medium comprising: (i) a data area to record therein record data; (ii) a spare area to record therein evacuation data
5 which is record data to be recorded at a position of a defect in said data area or which is record data recorded at the position; and (iii) a temporary defect management area to temporarily record therein defect management information including at least an evacuation source address which is an address of the position and an evacuation destination address which is an
10 address of a recording position of the evacuation data,

said recording method comprising:

a defect management information generating process of generating or updating the defect management information; and

a recording process of recording at least one of the record data, the
15 evacuation data, and the generated or updated defect management information,

said defect management information generating process generating the evacuation destination address which is specified by a first offset address based on one predetermined point in said spare area, to thereby generate or
20 update the defect management information.

14. A reproducing apparatus for reproducing the record data recorded on the information recording medium according to claim 1,

said reproducing apparatus comprising:

25 a storing device;

a first reading device for reading the defect management information

recorded in said temporary defect management area and storing the read defect management information into said storing device; and

a reproducing device for reproducing the record data recorded in said data area or the evacuation data recorded in said spare area, on the basis of
5 the defect management information stored in said storing device,

said reproducing device calculating the evacuation destination address on the basis of the first offset address.

15. A reproducing method in a reproducing apparatus for reproducing the
10 record data recorded on the information recording medium according to claim 1,

said reproducing method comprising:

a first reading process of reading the defect management information recorded in said temporary defect management area; and

15 a reproducing process of reproducing the record data recorded in said data area or the evacuation data recorded in said spare area, on the basis of the read defect management information,

said reproducing process calculating the evacuation destination address on the basis of the first offset address.

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16. A computer program for recording control to control a computer disposed in the recording apparatus according to claim 7, said program making the computer function as at least one portion of said defect management information generating device and said recording device.

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17. A computer program for reproduction control to control a computer

disposed in the reproducing apparatus according to claim 14, said program making the computer function as at least one portion of said first reading device and said reproducing device.

- 5 18. A data structure comprising:
- a data area to record therein record data;
- a spare area to record therein evacuation data which is record data to be recorded at a position of a defect in said data area or which is record data recorded at the position; and
- 10 a temporary defect management area to temporarily record therein defect management information including at least an evacuation source address which is an address of the position and an evacuation destination address which is an address of a recording position of the evacuation data,
- the evacuation destination address being specified by a first offset
- 15 address based on one predetermined point in said spare area.